

0.3-0.6 percent by weight Fe; and

0.65-0.85 percent by weight Sn.

14. The zirconium-based alloy according to claim 13, further comprising:

up to 0.2 percent by weight Ni.

15. The zirconium-based alloy according to claim 13, further comprising:

up to 0.6 percent by weight Cr.

16. The zirconium-based alloy according to claim 13, wherein the total content of Nb and Sn is larger than or equal to 1.15 percent by weight.

17. The zirconium-based alloy according to claim 13, wherein the alloy comprises a part of a component in a nuclear energy plant.

18. The zirconium-based alloy according to claim 17, wherein the component comprises a part of a fuel assembly.

19. A component in a nuclear energy plant, comprising:

a zirconium-based alloy comprising 0.65-1.6 percent by weight Nb, 0.3-0.6 percent by weight Fe, and 0.65-0.85 percent by weight Sn.

20. The component according to claim 19, wherein the component comprises a part of a

fuel assembly.

21. The component according to claim 20, wherein the component comprises a cladding tube for nuclear fuel.

22. The component according to claim 21, wherein at least a part of an inner circumference of the component comprises a layer of a material that is more ductile than the alloy.

23. The component according to claim 22, wherein the layer comprises a zirconium-based alloy having a total content of alloying elements that does not exceed 0.5 percent by weight.

24. The component according to claim 19, wherein the component comprises a cladding tube for nuclear fuel.

25. The component according to claim 24, wherein at least a part of an inner circumference of the component comprises a layer of a material that is more ductile than the alloy.

26. The component according to claim 25, wherein the layer comprises a zirconium-based alloy having a total content of alloying elements that does not exceed 0.5 percent by weight.